February 7, 2025

FIRE SAFE MARIN
Adapting to Wildfire

MARIN WILDFIRE PREVENTION AUTHORITY
Investing in a Fire-Adapted Marin County

Fire Smart Landscaping: from design to maintenance



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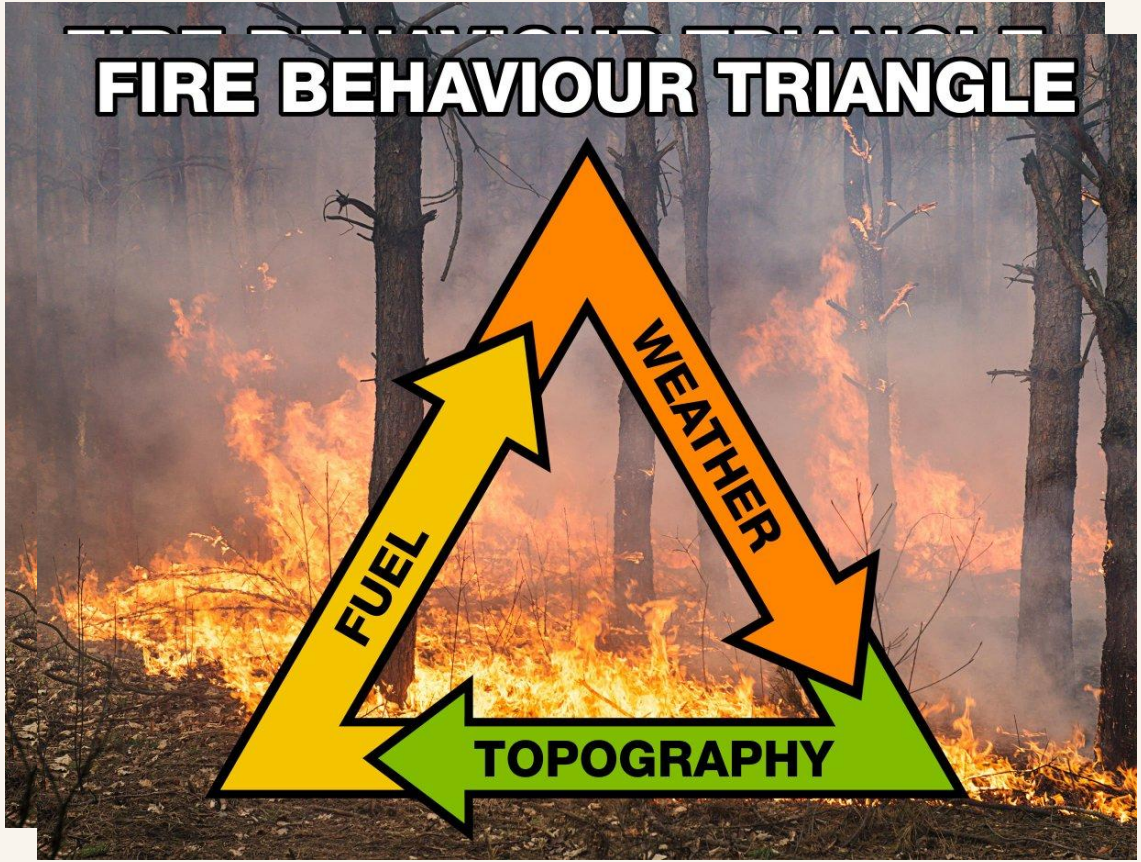
Topics

- Wildfire Science
- Fire-Smart Landscape Design Basics
- Choose the Right Plants and Mulch
- Importance of Maintenance to Reduce the Risk of Wildfire

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Wildfire Science

Fuel/Weather/ Topography









Embers

The Primary Cause of Home Ignitions



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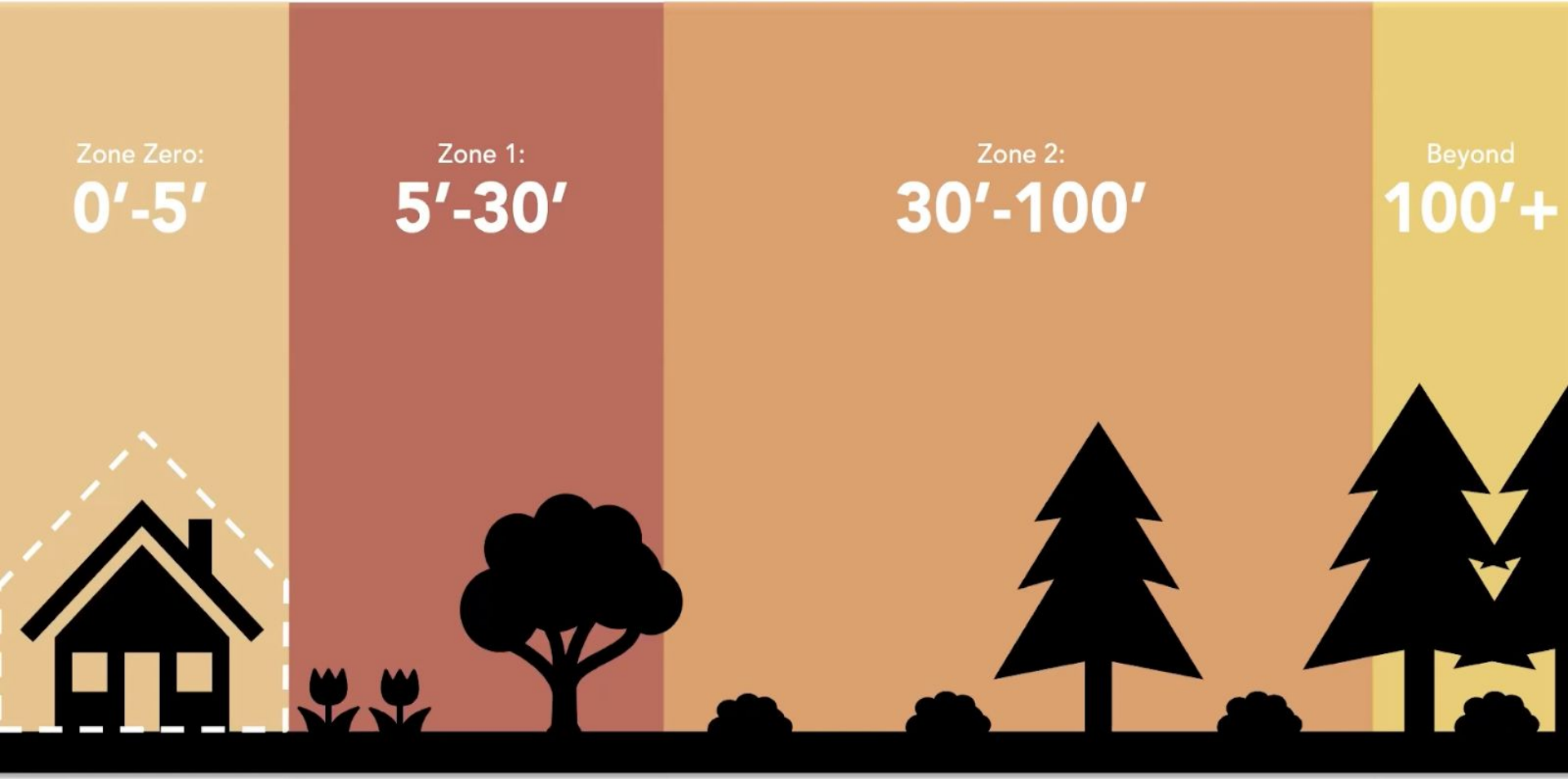
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Fire Smart Landscape Design





The Four Primary Defensible Space Zones

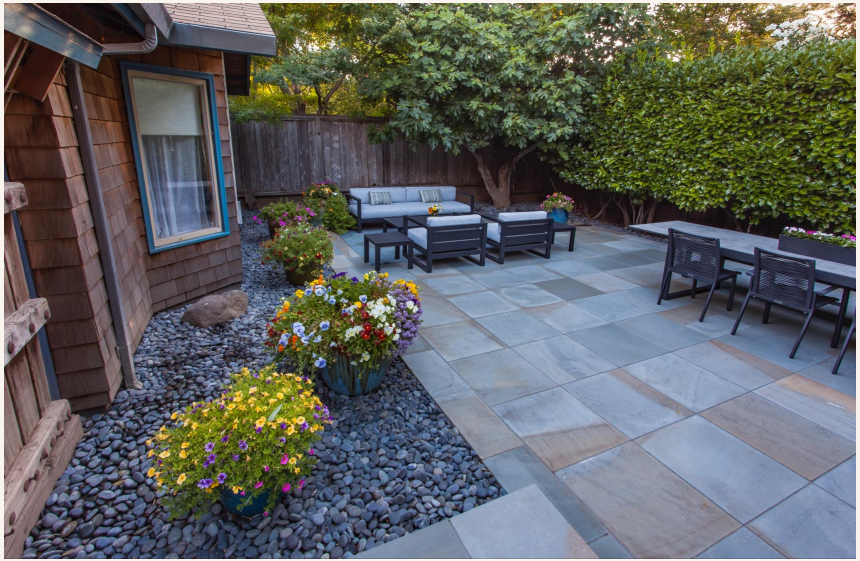



These zones make up the 100′ of Defensible Space required by law
4
4
100′ - 200′+
2
2
2
1
1
30′ - 100′
30′
30′
*dormer
0
0
0
3
3
10′
10′
5′
5′
5′
5′
5′



ZONE ZERO







Zone 0 Recommendations

- Remove combustible outdoor furniture. Replace with metal or non-combustible varieties.
- Replace jute or natural fiber doormats with heavy rubber or metal grates.
- Remove or relocate all combustible materials including garbage and recycling containers, lumber, trash, and patio accessories.
- Clean all fallen leaves and needles.
- No vegetation is recommended within 5’ of any structure.
- Remove tree limbs that extend into this zone. Fire-prone tree varieties should be removed if they extend into this zone.
- Do not store firewood, lumber, or combustibles here, even (especially) under decks or overhangs. Move stored combustibles inside or at least 30’ from any structure.
- Use only inorganic, non-combustible mulches such as stone or gravel
- Hardscaping is strongly recommended around the base of structures.

Zone 1: Home Ignition Zone 5-30’

Use hardscape and plant islands to create separation



How do we place plants to stop fire from spreading?













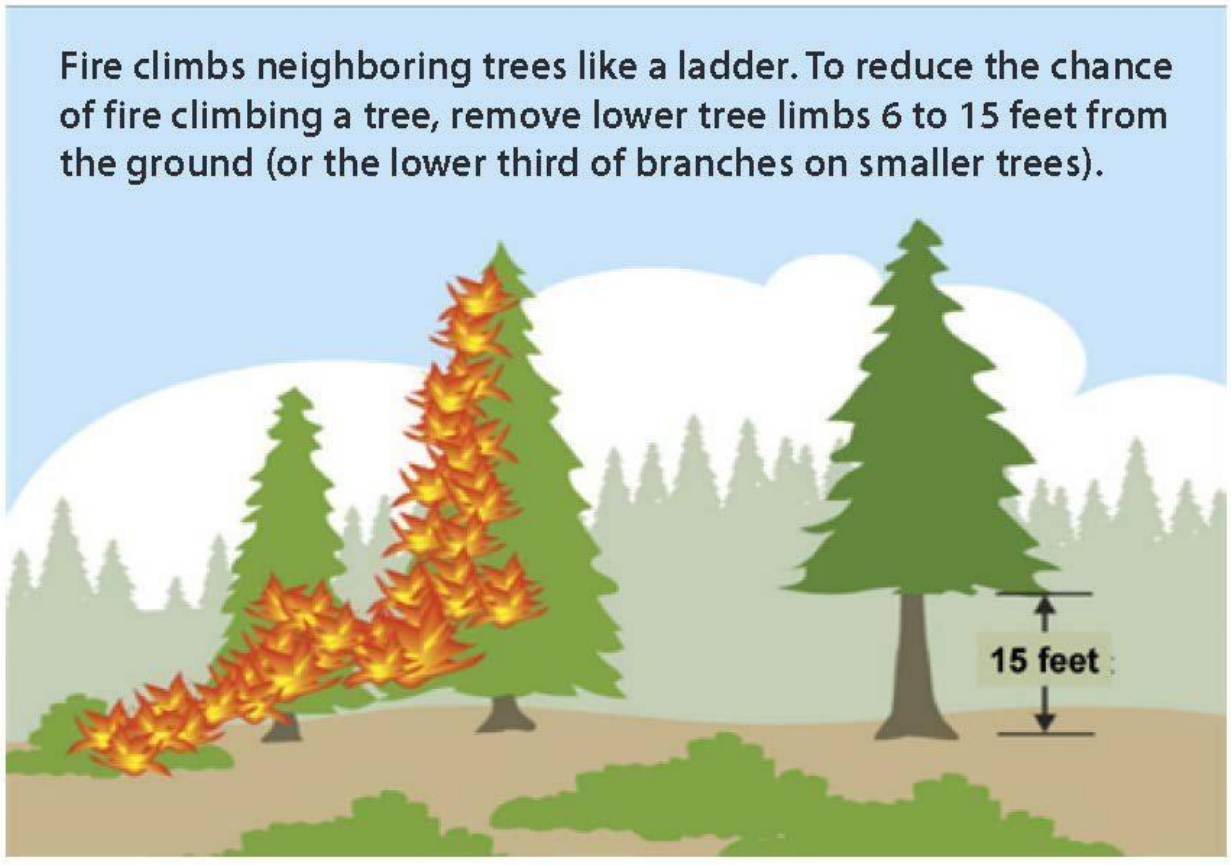


Homeowners #1 Concern: “My Neighbors Tree”





Eliminate Ladder Fuels



How much vertical clearance is needed for trees?

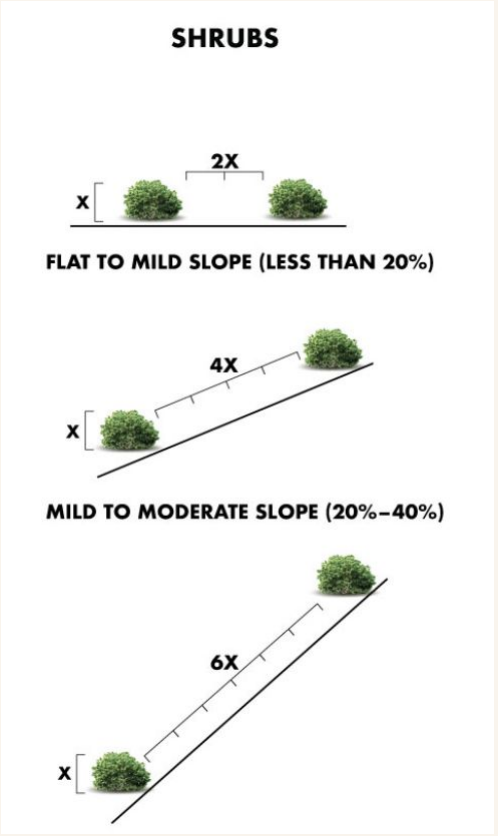


How does the shape of the land affect landscaping decisions?

Plants and trees must be properly spaced on slopes. Rising heat means that vegetation must be spread further apart on steeper terrain.



What is the correct spacing for planting on a slope?



Zone 2: 30-100’ - Shaded Fuel Breaks





Zone 2

- Cut or mow annual grass down to a maximum height of 4 inches.
- Create horizontal spacing between shrubs and trees.
- Create vertical spacing between grass, shrubs, and trees
- Remove fallen leaves, needles, twigs, bark, cones, and small branches. However, they may be permitted to a depth of 3 inches if erosion control is an issue.
- Remove all piles of dead vegetation.



Zone 3: Access Zone

Extends from 3′ to at least 10′ horizontally from
the edge of roads and driveways and 14′ overhead.

Access roads are critical for evacuation and 1st Responders

- Clear vegetation 14’ overhead and 10’ from sides of roads and driveways
- Maintain 12’ of unobstructed pavement for passage of vehicles.
- Plantings shall be fire resistant and must not extend into the roadway.
- 14’ of clearance is required above the roadway for emergency vehicle
- Address numbers must be clearly visible from the road,
- Create vertical spacing between shrubs, lower tree limbs. Cut all grasses.



Zone 4:
Community Zone:

Property owners required to maintain defensible space to their property line. Work with neighbors and land management agencies to maintain these larger spaces.

Firewise Communities encourage cooperation among neighbors

NFPA® | FIREWISE USA®
RESIDENTS REDUCING WILDFIRE RISKS



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Choose the Right Plants & Mulch





What Plants are Fire Safe?

All plants will burn under the right conditions, regardless of their classification. A plant's environment and maintenance generally have more influence on the combustibility of the plant than does its characterization as fire safe or not fire safe.

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Plant Lists

https://firesafemarin.org/create-a-fire-smart-yard/plants/fire-smart-plants/

Fire smart landscaping involves:

- Plant selection
- Correct sizing
- Plant placement & spacing
- Lots of maintenance

Fire Prone Plants

- They are often blade-leaf or needle-leaf evergreens.
- They have stiff, woody, small or fine, lacey leaves.
- Their leaves and wood often contain volatile waxes, fats, terpenes or oils (crushed leaves will have strong odors).
- Their sap is usually gummy, resinous and has a strong odor.
- They usually contain plentiful fine, twiggy, dry or dead materials.
- They may have pubescent (hair covered) leaves.
- They may have loose or papery bark.
- These plants flame (not smolder) when preheated and ignited with a match.

Juniper





Italian Cypress / Arborvitae





Bamboo / Pampas Grass



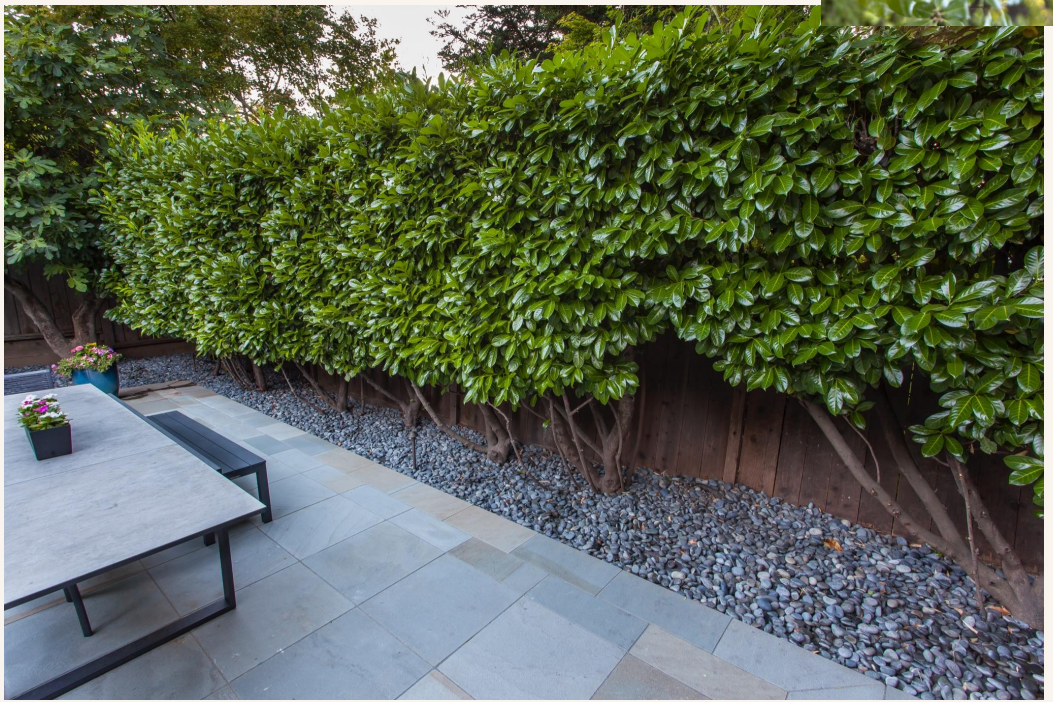


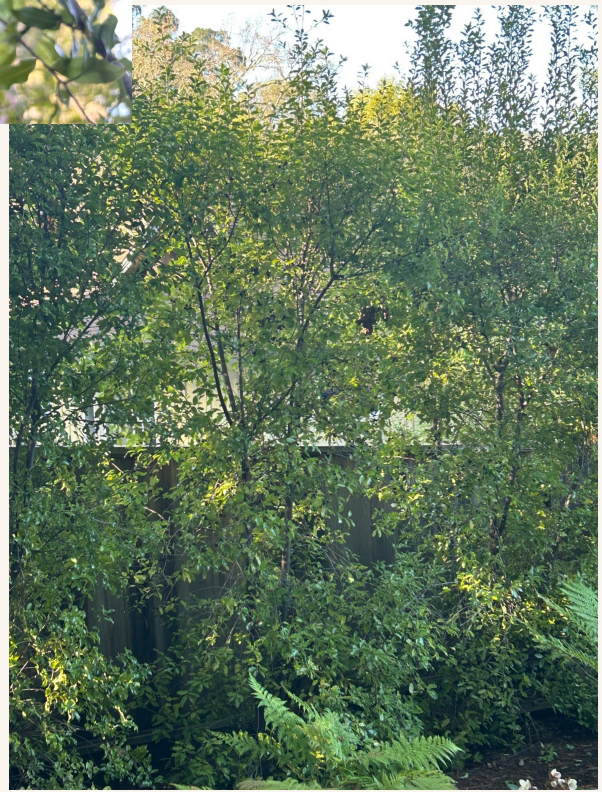
Privacy Screens



Better Choices for Privacy







What is the best mulch to use in Zone O?



Gorilla Hair



Stones or Gravel



Composted Wood Chips



Pine Needles



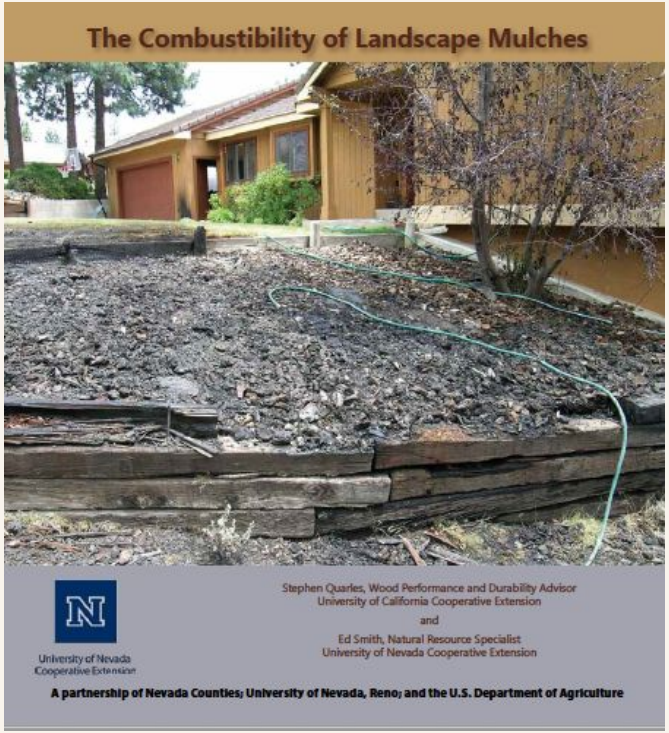


Mulch Fires





- **Composted wood chips showed the slowest spread rate and the shortest average flame length, usually smoldering.**
- Shredded rubber, pine needles, and shredded western red cedar showed the greatest potential for all three characteristics.
- Shredded rubber burned at the hottest average temperature and produced the greatest flame length.
- Shredded western red cedar had the most rapid rate of spread and produced embers that moved beyond the plot perimeter and ignited adjacent mulch plots.



Maintenance









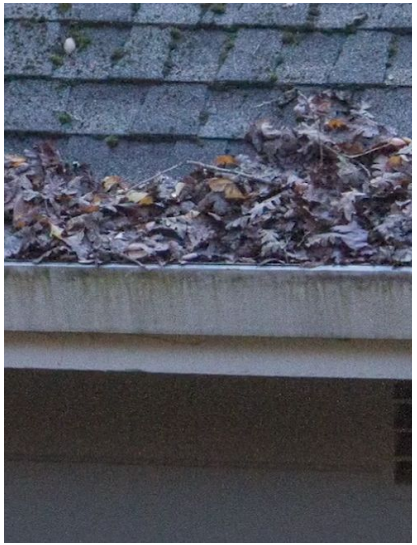












Identify the maintenance needs

Maintenance is critical for fire safety
Remove dead leaves and twigs under shrubs
Prune dead vegetation





Checklist

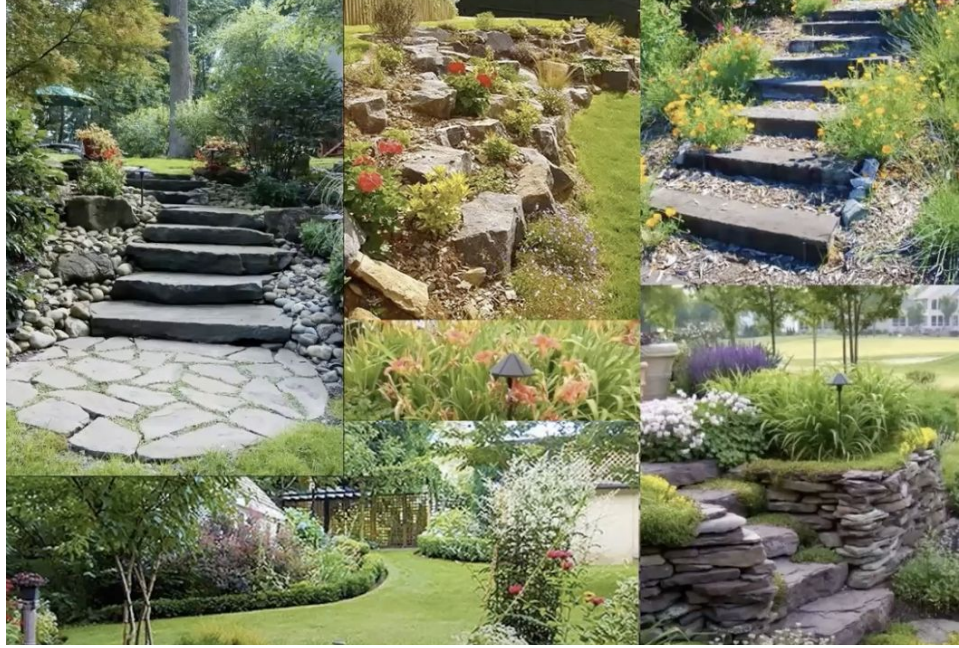
What you can do to reduce the risk of wildfires

- ✔ Share the Homeowners Guide to Wildfire Preparedness in Marin County
- ✔ Remove dead grasses, weeds, plants & foliage
- ✔ Remove fallen leaves, needles, twigs, bark cones and small branches
- ✔ Remove combustibles around and under decks and awnings
- ✔ Remove branches that overhang the roof or within 10’ of chimneys
- ✔ Trim trees to remove limbs 6’ – 10’ feet from the ground
- ✔ Choose native and drought tolerant plants and keep well irrigated

Request copies of **Homeowner's Guide to Wildfire Preparedness in Marin County** from NorCal Landscape Contractors Association or FIRESafe MARIN







You can create and maintain a beautiful **fire-smart** landscape





Thank you for participating.

www.firesafemarin.org



